



**ROAD PAVEMENTS
FORUM**

PIARC – SANRAL International Seminar Road Disaster Management

Marshall Muthen



PIARC – SANRAL International Seminar

The impact of extreme weather events on road transport systems and infrastructure



- PIARC Technical Committee 1.5 - Disaster Management
 - TC mandated to address topics related to improving the way road agencies manage during natural disasters.
- TC Focus: Disaster management against “Extreme Weather”
 - Coping with extreme weather
 - Social resilience within communities and public authorities for extreme weather
 - Infrastructure resilience for supporting supply chain during extreme weather events
- Seminar Objectives
 - Share expertise
 - Present relevant case studies,
 - Present effective solutions on preparedness, mitigation, response and recovery to extreme weather impacts.

Attendance – 204 delegates

- 2-day seminar (October 16-17)
 - Seminar Day 1 & 2 – Open to public registrations
 - + day 3 – reserved for PIARC Technical Committee
 - R1250/day registration fee
 - 2 ECSA CPD points
- Venue
 - Originally planned for CTICC
 - Zimbali, Ballito selected – severe impacts of recent climatic events on KZN Coastal areas



Recent Extreme Climatic events in KZN-NC



Attendance – 205 Delegates

SANRAL	80
eThekweni Metro Municipality	34
International - PIARC TC	12
Africa Regional	6
National Dept. of Transport	3
Western Cape Provincial Gov.	3
KZN Provincial Gov.	2
Eastern Cape Provincial Gov.	3
Free State Provincial Gov.	1
Other	64

Delegates

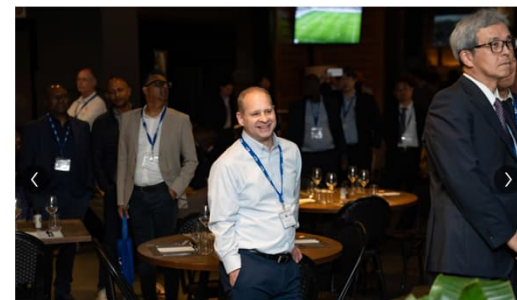


Day 1

DAY 1	TITLE	SPEAKER (OR CHAIR)	ON-SITE/ON-LINE
8:30-9:00	Registration		
9:00-9:45	OPENING SESSION	MASTER OF CEREMONY	
10min	Welcoming Word from Host Country	Reginald Demana, First Delegate of PIARC, CEO SANRAL	On-site
10min	Institutional Presentation of PIARC	[PIARC Former President] Nazir Ali	On-site
10min	Introduction from PIARC Technical Committee 1.5	[PIARC TC1.5] Yukio Adachi, Chair of TC 1.5, Japan	On-site
15min	Official Opening from South Africa (National Department of Transport)	Minister Barbara Creecy (TBC), Director-General Leonard Malapane	On-site
9:45-11:15	SESSION 1 - COPING WITH EXTREME WEATHER	MODERATOR: [PIARC TC1.5] TOSHIYUKI YAMADA (JPN)	
2min	Introduction by Session Chair		
15min	Building Climate-Resilient Municipal Road Infrastructure: Local Government's Role in Disaster Preparedness, Response, and Recovery	South African Local Government Association] ThixoUnathi Mntonintshi (RSA)	On-site
15min	Road Closure Criteria: The Case of Portugal	[PIARC TC1.5] Pedro Silva (POR)	On-line
15min	Coping with Clear Ice Hazards on Expressways	[PIARC TC1.5] Jongwook Jo (KOR)	On-line
15min	Slope Management Response Strategies to Exceptional Weather Events on South African Road Infrastructure	[SANRAL] Andrew Ssekayita (RSA)	On-site
15min	Early Warning Systems: A South African Perspective	[South African Weather Services] Tokelo Chiloane (RSA)	On-site
10min	Q&A and debate		
3min	Conclusions by Session Chair		
11:15-11:45	BREAK		
11:45-13:15	SESSION 2 - ORGANISING SPECIFIC EXTREME WEATHER RESPONSE	MODERATOR: [SANRAL] TSHIMANGADZO MASINDI (RSA)	
2min	Introduction by Session Chair		
15min	Co-Designing Smart, Resilient & Inclusive Mobility Through a Participatory Framework for Disaster-Responsive Transport Planning in Urban Areas of the Global South	[University of KwaZulu-Natal] Professor Dillip Das (RSA)	On-site
15min	British Columbia Provincial Emergency Exercise Program: Role of the Transportation Authority	[PIARC TC1.5] Mike Pearson (CAN)	On-line
15min	Strategy and Practical Use of Temporary Bridges and Retaining Structures during FLOOD 2024	[PIARC TC1.5] Jan Gruber (CZE)	On-line
15min	Organisation Specific(SANRAL) Strategic Framework on Climate Change/Extreme Weather	[SANRAL] Dumisani Nkabinde (RSA)	On-site
15min	Flood Defense Solutions	[Arcelor Mittal] Gugulethu Mthembu (RSA)	On-site
10min	Q&A and debate		
3min	Conclusions by Session Chair		
13:15-14:15	LUNCH BREAK		

14:15-15:45	SESSION 3 - CASE STUDIES FROM HIC AND LMIC	MODERATOR: [SANRAL] REABETSWE SEKGOTHUDI (RSA)
2min	Introduction by Session Chair	
15min	Lessons from the April 2022 KZN Floods	[Tooley Solutions] Geoff Tooley (RSA) On-site
15min	Disaster Management Manual in PIARC	[PIARC TC1.5] Yoshinori Obata (JPN) On-site
15min	Not Just Rain and Wind: What Extreme Weather Teaches Us About Transportation Security	[PIARC TC1.5] Jason Carnes (USA) On-site
15min	Climate Resilient Drainage Design Re-evaluating P103 Failures Using Climate Adjusted Rainfall Models	[PMA Consulting] Siyabonga Bhengu (RSA) On-site [PMA Consulting] Siyabonga Bhengu (RSA) On-site
25min	Q&A and debate	
3min	Conclusions by Session Chair	
16:15-17:30	PANEL DISCUSSION 1 : FUNDING MODELS FOR RECOVERY FROM DISASTER	MODERATOR: [SANRAL/PIARC TC1.5] KWANELE SIMELANE (RSA)
2min	Introduction by Session Chair	
15min	Responding to Extreme Weather Impact on Road Transport and Infrastructure: Beyond Climate Change	[Resilience Global] Dr Andries Jordaan (RSA) On-site
15min	Rebuilding Lifelines: U.S. Strategies for Transportation Recovery Funding	[PIARC TC1.5] Chris Engelbrecht (USA) On-site
15min	How Can Disaster-Damaged Highways be Restored Quickly and Reliably?	[PIARC TC1.5] Yukio Adachi (JPN) On-site
15min	Municipal Infrastructure (Roads) Disaster Recovery Funding	[South African Local Government Association] ThixoUnathi Mntonintshi (RSA) On-site
3min	Conclusions by Session Chair	
17:30	END OF DAY 1	

Social & Networking



Day 2

DAY 2	TITLE	SPEAKER (OR CHAIR)	ON-SITE/ON-LINE
8:30-9:00	Registration		
9:00-10:30	SESSION 4 - HOW ROAD INFRASTRUCTURE CAN IMPROVE RESILIENCE OF THE COUNTRY	MODERATOR: [PIARC TC1.5] MASAKI TSUBOUCHI (JPN)	
2min	Introduction by Session Chair		
115min	Reinforcing Resilience: Adaptive Road Infrastructure for a Climate-Stressed KwaZulu-Natal and South Africa	[University of KwaZulu-Natal] Mohamed Mostafa (RSA)	On-site
15min	Improving resilience by adapting to Climate Change in Victoria, Australia	[PIARC STC] Caroline Evans (AUS)	On-line
15min	Interagency Cooperation for Disaster	[PIARC TC1.5] Ryuma Nishikubi (JPN)	On-site
15min	Quantifying Carbon Emissions in Road Infrastructure: Objectives, Insights, and Reporting Frameworks for Sustainable Development	[Naidu Consulting] Tarlia Gerald (RSA)	On-site
15min	Exploration and Integration of New Technologies in Building Resilience: Road Transport Disaster Management	National Depart of Transport] Solly Chuene (RSA)	On-site
10min	Q&A and debate		
3min	Conclusions by Session Chair		
10:30-11:00	Break		
11:00-12:30	SESSION 5 - INFRASTRUCTURE RESILIENCE SUPPORTING SUPPLY CHAIN	MODERATOR: [SANRAL] JUSTICE CHAUKE (RSA)	
2min	Introduction by Session Chair		
15min	Integrated Climate Action in Infrastructure: Aligning Policy, Mitigation and Adaptation for a Just Transition	[Naidu Consulting] Mahendren Manicum (RSA)	On-site
15min	Highways Emergency Management Transformed Through Rapid Impact Assessment	[PIARC TC1.5] John Lamb (UK)	On-line
15min	Expressway Proactive Closure Management in Cooperation with Various Stakeholders in Forecast of Heavy Snowfall	[PIARC TC1.5] Sota Tomobe (JPN)	On-site
15min	Planning the Resilience of Road Networks Climate Change and Other Hazards: A Perspective for African Countries	[Full Circle Partners] Danai Magugumela (RSA)	On-site
25min	Q&A and debate		
3min	Conclusions by Session Chair		
12:30-13:30	LUNCH BREAK		

13:30-15:00	SESSION 6 - SOCIAL RESILIENCE	MODERATOR: [SANRAL] SALOME NAICKER (RSA)
2min	Introduction by Session Chair	
15min	Examining Road Disaster Risk and Inequality in South Africa	[RHDHV-Atana] Karen King (RSA) On-site
15min	Towards Diversity and Inclusion in Road Disaster Management: Insights from the Osaka Workshop	[PIARC TC1.5] Saki Yostui (JPN) and Heather Griffin (UK) On-line
15min	Case Studies Shows the Importance of Social Resilience in Disaster Management	[PIARC TC1.5] Tomo Fujita (JPN) On-site
15min	Promoting Sustainable and Resilient Bridge Infrastructure Through Early Warning Instrumentation and Advanced Assessment and Repair Strategies	[Naidu Consulting] Thobekile Ngcobo & Abish Gopal (RSA) On-site
25min	Q&A and debate	
3min	Conclusions by Session Chair	
15:00-15:30	BREAK	
15:30-17:15	PANEL DISCUSSION 2 - HOW TO MANAGE DIFFERENT CLIMATES AND GEOGRAPHY WITHIN THE SAME COUNTRY	MODERATOR: [SANRAL/PIARC TC1.5] NOMSA MODISE (RSA)
2min	Introduction by Session Chair	
10min	Meteorologist Perspective: Weather Systems RSA Context	[National Research Foundation] Dr Mary-Jane Bopape (RSA) On-line
10min	Interagency Coordination for Managing Disparate Geographies in the USA	[PIARC TC1.5] Amanda Anderson [USA] On-line
10min	Chilean Road Administration During Emergencies	[PIARC TC1.5] Marcelo Medina (CHL) On-line
10min	South African Road Transport Disaster Management Context	[National Depart of Transport] Solly Chuene (RSA) On-site
10min	Climate Resilient Transport Solutions: Insights from Seven-Year Research into High Volume Transport Across Africa and South Asia	[Tanzania Road Agency] Joseph Haule (TZN) On-site
45min	Q&A and debate	
3min	Conclusions by Session Chair	
17:15-17:30	Closing Session Technical Conclusions	[PIARC TC1.5] Yukio Adachi, Chair of TC 1.5, Japan On-site
	CLOSING REMARKS	

Day 3 – PIARC TC



Credits



ORGANISING COMMITTEE

Yukio Adachi

Chair TC1.5 Disaster Management

Marcelo Medina Santibanez

TC1.5 Spanish Speaking Secretary

Christopher Engelbrecht

TC1.5 English Speaking Secretary

Alain Lefebvre

TC1.5 French Speaking Secretary

Kwanele Simelane

Seminar Secretariat
RSA Representative

Tshidi Ramabya

South African Road Federation

ADVISORY COMMITTEE

Reginald Demana

South African First Delegate

Randall Cable

PIARC Executive Committee Member

Patrick Mallejacq

PIARC General Secretary

Miguel Caso

Florez

PIARC Technical Director

